AMENDMENTS TO THE CLAIMS

1.   (Currently Amended) A storage system, comprising:

a plurality of storage devices;

a cache;

a memory; and

a storage controller coupled to said plurality of storage devices and comprising:

an storage device interface, wherein said plurality of storage devices are coupled to said storage controller at said storage device interface;

a host interface, wherein said storage controller is connectable to at least one host via said host interface;

means for processing host commands, coupled to said storage device interface, said host interface, said cache and said memory,

wherein, when said means for processing host commands processes a host command for reading or writing to said storage devices, said means for processing host commands also records statistics associated with a processing of said host commands in said memory and continuously generates and updates a histogram configured to show the recorded statistics in real time.

2.   (Original) The storage system of claim 1, wherein said means for processing host commands records statistics by maintaining a plurality of numeric values and a plurality of time stamps.

3.   (Original) The storage system of claim 2, wherein a first one of said numeric values relates to a number of read commands received by said means for processing host commands and said means for processing host commands increments said first one of said numeric values when a new read command is received by said means for processing host commands.

4.   (Original) The storage system of claim 3, wherein said means for processing host commands records a time when said new read command is received in a first one of said plurality of time stamps.

5.   (Original) The storage system of claim 4, wherein

a second one of said numeric values relates to a number of storage units read and

if said means for processing host command causes said storage device interface to read one or more storage units from said plurality of storage devices, said means for processing host commands increments said second one of said numeric values by a number of storage units read by said storage device interface to process said new read command.

6.   (Original) The storage system of claim 5, wherein said means for processing host commands records in a second one of said plurality of time stamps a time when said number of storage units were read by said storage device interface to process said new read command.

7.   (Original) The storage system of claim 6, wherein said means for processing host commands calculates a time to read data associated with said new read

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command as a difference between said first one and said second one of said plurality of time stamps, and records said time in a third one of said plurality of time stamps.

8.   (Original) The storage system of claim 7, wherein said means for processing host commands records in a fourth one of said plurality of time stamps a time when data corresponding to said new read command is communicated to a host via said host interface.

9.   (Original) The storage system of claim 8, wherein said means for processing host commands calculates a time to complete a new read command as a difference between said first one and said fourth one of said plurality of time stamps.

10.   (Original) The storage system of claim 2, wherein a first one of said numeric values relates to a number of write commands received by said means for processing host commands and said means for processing host commands increments said first one of said numeric values when a new write command is received by said means for processing host commands.

11.   (Original) The storage system of claim 10, wherein said means for processing host command records a time when said new write command is received in a first one of said plurality of time stamps.

12.   (Original) The storage system of claim 11, wherein

a second one of said numeric values relates to a number of storage units written and

if said means for processing host commands causes said storage device interface to write one or more storage units from said plurality of storage devices, said means for processing host commands increments said second one of said numeric values by a

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number of storage units read by said storage device interface to process said new write command.

13.   (Original) The storage system of claim 12, wherein said means for processing host commands records in a second one of said plurality of time stamps a time when said number of storage units were written by said storage device interface to process said new write command.

14.   (Original) The storage system of claim 13, wherein said means for processing host commands calculates a time to write data associated with said new write command as a difference between said first one and said second one of said plurality of time stamps, and records said time in a third one of said plurality of time stamps.

15.   (Original) The storage system of claim 14, wherein said means for processing host commands records in a fourth one of said plurality of time stamps a time when data corresponding to said new write command is communicated to a host via said host interface.

16.   (Original) The storage system of claim 15, wherein said means for processing host commands calculates a time to complete a new write command as a difference between said first one and said fourth one of said plurality of time stamps.

17.   (Original) The storage system of claim 2, wherein one of said numeric values relates to a number of cache hits, and said means for processing host commands increments said first one of said numeric values when processing a new read command or a new write command results in a cache hit.

18.   (Original) The storage system of claim 2, wherein one of said numeric values relates to a number of cache hits, and said means for processing host commands increments said first one of said numeric values when processing a new read command or a new write command results in a cache miss.

19.   (Original) The storage system of claim 2, wherein one of said numeric values relates to a number of cache hits, and said means for processing host commands increments said first one of said numeric values when processing a new read command results in a cache miss.

20.   (Original) The storage system of claim 2, wherein one of said numeric values relates to a number of cache hits, and said means for processing host commands increments said first one of said numeric values when a processing a new write command results in a cache miss.

21.   (Original) The storage system of claim 1, wherein said means for processing host commands records independent sets of statistics for each one of a plurality of hosts which issue commands to said storage system.

22.   (Original) The storage system of claim 21, wherein said means for processing host command records independent sets of statistics for each host port of a given host.

23.   (Original) The storage system of claim 1, wherein said means for processing host commands records independent sets of statistics for each host volume.

24.   (Original) The storage system of claim 1, wherein said means for processing host commands records independent sets of statistics for each network storage segment.

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25.   (Original) The storage system of claim 1, wherein said means for processing host commands records independent sets of statistics for each storage element loop.

26.   (Original) The storage system of claim 1, wherein said means for processing host commands records independent sets of statistics for each storage element.

27.   (Currently Amended) A method for collecting and generating statistical data for a storage system, comprising:

receiving a command, said command being a read command or a write command;

processing said command;

while processing said command, collecting and storing operational statistics regarding said command at each one of a plurality of steps which comprise said processing; and

displaying the operational statistics in a histogram that is updated each time the operational statistics are collected, such that the statistics may be viewed in real time.

28.   (Original) The method of claim 27, wherein said command is a read command and said step of collecting and storing operational statistics includes incrementing a count of a number of read commands received.

29.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics includes storing a time of when the read command was received.

30.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics includes incrementing, by a number of storage units read while processing said read command, a count of a total number of storage units read.

31.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics includes storing a time of when said number of storage units were read while processing said read command.

32.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics includes storing a time of when read data is transmitted in response to said read command.

33.   (Original) The method of claim 27, wherein said command is a write command and said step of collecting and storing operational statistics includes incrementing a count of a number of write commands received.

34.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics includes storing a time of when the write command was received.

35.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics includes incrementing, by a number of storage units written while processing said write command, a count of a total number of storage units written.

36.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics includes storing a time of when said number of storage units were written while processing said write command.

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37.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics includes storing a time of when write data is transmitted in response to said write command.

38.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics includes incrementing a cache hit counter whenever processing said command results in a cache miss.

39.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics includes incrementing a cache miss counter whenever processing and command results in a cache miss.

40.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics is independently performed for each host.

41.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics is independently performed for each port of each host.

42.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics is independently performed for each host volume.

43.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics is independently performed for each network segment.

44.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics is independently performed for each storage element loop.

45.   (Original) The method of claim 27, wherein said step of collecting and storing operational statistics is independently performed for each storage element.

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